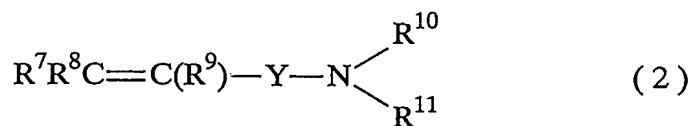
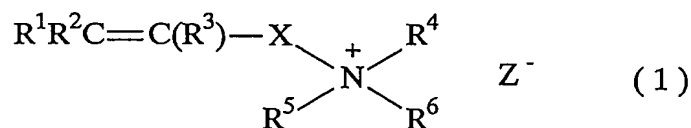


IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An antifouling detergent for hard surfaces, comprising a polymer having a weight-average molecular weight of 1,000 to 80,000 and having a monomer unit derived ~~from at least one member selected from the group consisting of a compound represented by the formula (1) below and a compound represented by the formula (2) below~~ in an amount of 10 to 100 mol-% relative to the whole monomer units,



wherein R^1 , R^2 , R^3 , R^7 , R^8 and R^9 each represent a hydrogen atom, a hydroxyl group or a C_{1-3} alkyl group; ~~each of X and Y~~ is a group selected from the group consisting of a C_{1-12} alkylene group, $-\text{COOR}^{12}-$, $-\text{CONHR}^{12}-$, $-\text{OCOR}^{12}-$ and $-\text{R}^{13}-\text{OCO}-\text{R}^{12}-$ whereupon R^{12} and R^{13} each represent a C_{1-5} alkylene group; R^4 represents ~~a C_{1-3} alkyl group, a C_{1-3} hydroxyalkyl group or~~ $\text{R}^1\text{R}^2\text{C}=\text{C}(\text{R}^3)-\text{X}-$; R^5 represents a C_{1-3} alkyl group, a C_{1-3} hydroxyalkyl group or a benzyl group; and R^6 represents a C_{1-10} alkyl group ~~which may be substituted with a hydroxy group, a carboxyl group, a sulfonate group or a sulfate group, or a benzyl group, provided that when R^6 is an alkyl group, a hydroxyalkyl group or a benzyl group, Z^- represents an anion and when R^6 contains a carboxyl group, a sulfonate group or a sulfate group, Z^- is absent, but these groups of R^6 are anions;~~ R^{10} represents a hydrogen atom,

~~a C₁₋₃ alkyl group, a C₁₋₃ hydroxyalkyl group or R⁷R⁸C=C(R⁹)Y; and R¹¹ represents a hydrogen atom, a C₁₋₃ alkyl group or a C₁₋₃ hydroxyalkyl group.~~

Claim 2 (Previously Presented): An antifouling detergent composition for hard surfaces, comprising the polymer described in claim 1 and a surfactant.

Claim 3 (Previously Presented): A method of antifouling and washing hard surfaces, comprising treating the hard surfaces with the polymer described in claim 1.

Claim 4 (Previously Presented): The method according to claim 3, wherein the hard surfaces are those of toilet bowls.

Claim 5 (Previously Presented): An antifouling detergent for hard surfaces, comprising the polymer described in claim 1 and water-soluble solvent.

Claim 6 (Previously Presented): A method of antifouling and washing hard surfaces, comprising treating the hard surfaces with the composition of claim 2.

Claim 7 (Previously Presented): The method according to claim 6, wherein the hard surfaces are those of toilet bowls.

Claim 8 (Previously Presented): An antifouling detergent for hard surfaces, comprising the composition of claim 2 and a water-soluble solvent.

Claim 9 (Previously Presented): A method of antifouling hard surfaces, comprising treating the hard surfaces with the polymer described in claim 1 and a water-soluble solvent.

Claim 10 (Previously Presented): A method of antifouling hard surfaces, comprising treating the hard surfaces with the composition of claim 2 and a water-soluble solvent.

Claim 11 (New): The antifouling detergent of claim 1, wherein the compound represented by the formula (1) is di (ω -alkenyl (C_2 - C_{10})-dialkyl (C_1 - C_3) ammonium salt.

SUPPORT FOR THE AMENDMENT

Claim 1 is currently amended.

Claim 11 is added.

Support for the amendments to claim 1 can be found in claim 1, as originally filed.

Support for new claim 11 is found in the specification at page 7, line 18.

Upon entry of the amendment, claims 1-11 will be active in this application.

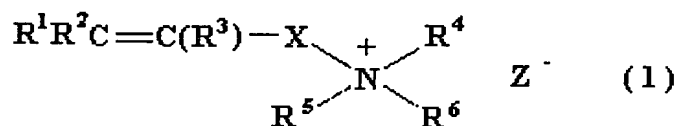
No new matter has been added by the amendments.

REQUEST FOR RECONSIDERATION

Applicants wish to thank Examiner Delcotto for the courtesies extended to Applicants' representative at the interview held on December 15, 2005, and for the follow-up discussed with the Examiner. At that time, Applicants discussed the differences between the cited references of record and the claimed invention. Applicants also thank the Examiner for consideration of the amendment proposal, and the Examiner's suggestions for overcoming the rejections. The following further expands on the discussion with the Examiner.

The claimed invention, as amended, relates to an antifouling detergent for hard surfaces, comprising:

a polymer having a **weight-average molecular weight of 1,000 to 80,000** and having a monomer unit derived a compound represented by the **formula (1)** below in an amount of 10 to 100 mol % relative to the whole monomer units,



wherein R^1 , R^2 , R^3 each represent a hydrogen atom, a hydroxyl group or a C_{1-3} alkyl group; X is a group selected from the group consisting of a C_{1-12} alkylene group, $-\text{COOR}^{12}-$, $-\text{CONHR}^{12}-$, $-\text{OCOR}^{12}-$ and $-\text{R}^{13}-\text{OCO}-\text{R}^{12}-$ whereupon R^{12} and R^{13} each represent a C_{1-5} alkylene group; **R^4 represents $\text{R}^1\text{R}^2\text{C}=\text{C}(\text{R}^3)-\text{X}-$** ; R^5 represents a C_{1-3} alkyl group, a C_{1-3} hydroxyalkyl group or a benzyl group; and R^6 represents a C_{1-10} alkyl group.

The present inventors have found that such an antifouling detergent, comprising the specifically claimed polymer, is excellent in preventing fouling and can easily remove fouling on hard surfaces. In particular, stains are prevented from re-depositing on a surface that has been washed with the claimed detergent. On the other hand, conventional detergents

that have anti-fouling properties only provide the result only after initial washing, and lose their effect with repeated use.

The rejection of claims 1-3, 5, 6, and 8-10 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. 6,251,849 to Jeschke et al., and the rejection of claims 4 and 7 under 35 U.S.C. § 103(a) as obvious over Jeschke et al. are obviated by amendment.

The Jeschke et al. reference generally discloses a cleaning agent for hard surfaces that contains a cationic polymer. However, the monomers of formulas (I), (II), and (III) in columns 2 and 3 of the reference, are not the same as the monomer of formula (I) in the polymer of the claimed invention. In particular, in the claimed invention, R^4 represents $R^1R^2C=C(R^3)-X-$, such that the claimed polymer has two diallyl groups. Moreover, none of the disclosed polymers in the reference have the claimed weight-average molecular weight of 1,000 to 80,000. Therefore, the claimed invention is not anticipated by the reference. Further, the claimed invention would not be obvious in view of the reference, since there is no evidence or suggestion to modify any of the polymer formulas in the reference to include the structure of the claimed formula (I).

Therefore, withdrawal of the rejection is requested.

The rejection of claims 1-10 under 35 U.S.C. § 102(a) as anticipated by WO 02/16356 is respectfully traversed.

The reference is not available as prior art against the present application. Applicants have provided herewith a certified English translation of the priority document, JP 2002-46121, of the present application.

Therefore, withdrawal of the rejection is requested.

The rejection of claims 1-10 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) obvious over JP 2001-271094 is obviated by amendment.

The reference generally discloses a stainproofing detergent having a high cleaning effect. However, formulas (I) – (IV) in the reference are not the same as the monomer unit of formula (I) of the claimed invention, as shown above. For instance, formulas (I) and (II) on page 4 of the reference do not include each of the claimed constituents, as shown above, for formula (I) of the claimed invention. Accordingly, the claimed invention is not described or suggested by the reference.

Therefore, withdrawal of the rejection is requested.

The rejection of claims 1-3 and 6 under 35 U.S.C. § 102(b) as anticipated by U.S. 5,308,532 to Adler et al. is obviated by amendment.

The Adler et al. reference generally discloses terpolymers for cleaning hard surfaces. However, none of the structures of the aminoacryloyl derivatives in columns 3 and 4 of the reference recite the same structure of the monomer of formula (I), as presently amended. Accordingly, the claimed invention is not described or suggested by the reference.

Therefore, withdrawal of the rejection is requested.

Applicants submit that new claim 11 is novel and obvious over the cited references, since the references do not describe the antifouling detergent of claim 1, wherein the compound represented by the formula (1) is di (ω -alkenyl (C_2 - C_{10})-dialkyl (C_1 - C_3) ammonium salt.

The objection to the present specification is respectfully traversed. Applicants submit that the present application contains an Abstract on page 37 of the present specification, as originally filed.

Accordingly, withdrawal of the objection is requested.

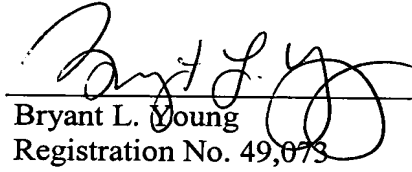
Application No. 10/500,469

Reply to Office Action of October 31, 2005

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, he is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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(OSMMN 06/04)